



Critical Thinking in  
**Economics**

Dennis Patrick Leyden

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**KONA**  
PUBLISHING & MEDIA GROUP

Kona Publishing and Media Group  
Higher Education Division  
Charlotte, North Carolina  
[www.konapublishing.com](http://www.konapublishing.com)

Design: Rokusek Design, Inc.

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ISBN: 978-1-935987-11-6

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# Preface

Economic thinking is all about making difficult choices. *Critical* economic thinking is all about being *aware* of how you think about economic issues so that you can make the best decisions possible. All of us engage in economic thinking whether it is shopping for ourselves, making business decisions that affect our fellow workers, or deciding on government policies that affect the entire nation. Of course such decision making is not done solely from an economic perspective. Shopping decisions are affected by a variety of cultural influences. Many business decisions such as in the area of marketing or human relations are based on applied psychology. And, of course, government policies are typically the result of complex political calculations. Nonetheless, economics has a lot to contribute to such decision making. Economics provides a wealth of general principles and empirical results that serve as a foundation for decision making in a wide array of areas and helps people understand how their decisions fit into the broader economic environment in which they act.

The purpose of this book is to help you to become a more effective economic thinker regardless of whether your interests are focused on personal issues, business affairs, or government policy. This book looks at *how* economists think and can be used either as a complement to a standard economics textbook (which focuses on the *subject* of economics) or as a standalone text for those who already know something of economics and wish to improve their ability to use and apply that knowledge. To that end, this book lays out for you a description of the thinking process typical in economics and provides suggestions and rules of thumb to help you make that thinking process your own. In addition, because thinking is a skill, and because skills can only be learned with practice, this book provides a number of exercises that give you the chance to learn and to hone the skills discussed in this book.

This book is the product of nearly thirty years of studying, teaching, and conducting research in economics. It could not have been completed without the help of many people. The germ for this book began nearly a decade and a half ago when, with the aid of a summer research grant from the Bryan School here at UNCG, I developed a rudimentary workbook that many years later became the inspiration for writing this book. This book has also benefited from having participated many years ago in an AEA-NCEE-Kazanjian Active Learning Workshop in Chapel Hill, North Carolina and being introduced to theories of learning. To the staff of that workshop, Michael Salemi, Phillip Saunders, William Walstad, Ann Velenchik, and especially Patrick Conway, I offer my thanks. And here at UNCG, I owe a debt of gratitude both to my colleagues in

the Department of Economics and to the thousands of students whom I have had the privilege and enjoyment of teaching over the years. The countless conversations I have had with my colleagues have helped me to clarify my thinking about economics, teaching, and critical thinking; and the interactions with my students both inside and outside the classroom have been crucial in keeping me connected to the realities of the classroom and in motivating me to continually look for better ways to help my students become intelligent thinkers.

At on more personal level, my abiding interest in, and enjoyment of, the life of the mind can be traced to a childhood in which thinking for oneself was a moral imperative, and for that I am grateful to my mother Anne T. Leyden and my late father Dennis R. Leyden, who, incidentally was also an economist (at West Virginia University and Mississippi State University) and who was instrumental in putting me in touch with the critical thinking literature. And I would be remiss if I did not express my thanks to my wife Peggy and children Ben and Sarah who have provided me with support, encouragement, and feedback.

Lastly, I want to thank my editor Kyler Ferguson and copy editor Kimberly Burwick for having faith in this project, providing valuable guidance, and being patient throughout the process of bringing this book to fruition. Their support has been greatly appreciated.

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October 8, 2010

# Fundamentals

## INTRODUCTION

Economic thinking is all about making difficult choices. Critical economic thinking is all about being aware of how you go about making those choices so you can make the best choices possible. Success in today's global economy requires an ability to continually reevaluate your circumstances so that you may make the best decisions you can. Critical economic thinking allows you to do that.

## FOUR STEPS TO THINKING CRITICALLY ABOUT ECONOMICS

To think critically about issues in economics, you need to begin by figuring out exactly what the issue is that you want to think about. Next take stock of “where you're coming from”, and then gather relevant information and look for possible answers to the specific question you seek to answer. Finally, evaluate all the material you have gathered and decide what the best answer to your question is and what that implies.

## CRITICAL DISCUSSIONS

Discussion is in many ways the most effective way to engage in critical thinking because it involves the whole person. In a classroom setting, a particularly useful way to engage in critical thinking is to focus on the analysis of a case study. To get the most out of a case, prepare ahead of time for the discussion and be ready to share your thinking with the rest of the class. In case discussions there are no wrong solutions, just solutions that must be compared and evaluated.

## CRITICAL READING AND WRITING

The results of economic thinking are of little value if you can't communicate your thoughts to others and others can't communicate their thoughts to you. Because reading and writing is more detached than discussion, it requires a special effort to stay engaged. The solution is to pretend that the author of the work you are reading or the audience you are writing for is there in the room with you.



## I.1

**INTRODUCTION**

*Critical thinking is thinking about your thinking while you're thinking in order to make your thinking better.*

RICHARD PAUL<sup>1</sup>

Economic thinking is all about making difficult choices. Is this the best time to buy a house? Should I expand my business overseas? How should I respond to a new competitor? Is it worth cutting tax rates to stimulate the economy if this drives the deficit up? Critical economic thinking is all about being aware of how you go about answering such questions so that you can make the best choice possible.

If you want good answers to economic questions, you need to understand the nature of economic forces around you, gather the best information you can, and figure out the best answer to the question at hand. Only purposeful, clear-headed, rational thinking will give you the best answer to your question. The decision of when to buy a house, for example, is a highly emotional one. However, an understanding of financial markets and the links between the construction industry, interest rates, and the business cycle can go a long way to assuring that you will be happy with your decision in the years to come. Deciding on whether to get a graduate degree is also a difficult decision. But an understanding of labor markets and an ability to accurately assess the benefits and the costs of the degree will greatly improve the chance that you make your decision for the right reasons and with a clear-eyed view of the future. Critical economic thinking gives you the ability to answer questions like these, and to do so as well as you can. In short, critical economic thinking is all about effective, high quality problem solving.

## BOX I.1

**THE CURSE OF GOOD FORTUNE**

Mary had a problem, though nobody at work thought so. It seems that Mary, after 2 years at August Bovin & Co., had done quite well. Her fellow employees trusted her and, more importantly, so did her boss. She was hard working (putting in 20 hours a week), intelligent, and trustworthy. But then it hit. Her boss asked her to take over the Monongahela account. It was a new account and by far the biggest that August Bovin & Co. had ever gotten in their brief 10 years of business. There was no question that Mary had the skills to do a good job, and if she took over the account, there would be a big increase in pay. Of course, she'd have to move to full time (or more!), but the pay raise was still big. So, it came as a big surprise to Mary's co-workers, to Mary's boss, and even to Mary herself when she didn't accept the

<sup>1</sup>The quote is from the philosopher Richard Paul (1992, p. 7). Richard Paul, who has been an active advocate for critical thinking for more than three decades, is professor emeritus at Sonoma State University and founder of the Center for Critical Thinking. If you are interested in learning more about the value of critical thinking and how it can be applied in areas both in and out of economics, check out the Center's website [www.criticalthinking.org](http://www.criticalthinking.org).

promotion on the spot. “But Mary, I need you,” her boss told her. Mary looked troubled. “Can I sleep on it?” she asked. Later that day, Mary went home early for the first time since she began working at August Bovin & Co.

When Mary got home, she was still troubled though not sure why. “After all,” she thought to herself, “I could handle it. This is a great opportunity, especially for someone still under 30 and with a company that’s on its way up. And I have no attachments or family to get in the way. This would be the perfect time to go after such an opportunity. And yet..”

Later that evening Mary called her parents. It seems Mary was going to college and working to help pay her own way. Not that her family didn’t have money. But the first time, at an expensive, private liberal arts school in Pennsylvania, things hadn’t worked out, and her parents were greatly disappointed. Still, her parents had offered her a deal. They would provide some support but in return Mary had to go to school full time and maintain at least a C+ average. When she told her parents what had happened that afternoon, they were non-committal about what she should do, but firm in their position. If the grades fell below a C+ average or if the number of hours in college was reduced to less than full time, no support now or ever again. Mary understood her parents when they argued for the value of a college degree. She could see there would be limits to her ability to move up in the company without a degree. She would never be able to become an office manager, and the idea of higher positions, well, it wasn’t even imaginable. And, yes, there was the risk that the company could fold or be bought out (August Bovin & Co. was in a business notorious for failures and buyouts). But August Bovin & Co. was well run, and there was every prospect that it would be an industry leader some day. And the money! Boy, it would be nice to not have to worry about getting to the next paycheck and being able to get a new car and take an occasional vacation like her friends. Maybe she should take the promotion. After all, her co-workers had told her on numerous occasions that she’d succeed in anything she did. And her boss, who had taken a big risk in hiring her 2 years ago, was depending on her. “But Mary,” Mary recalled her boss saying, “I need you.”

At this point, you may be thinking that critical economic thinking is just common sense, and you’d be right. Unfortunately, common sense is often not very common, and the level of thinking used by people to answer such questions is often quite shallow. In part, this is because many have never been formally exposed to economics. However, even those who have studied economics often continue to have problems. The reason for this is that often times they learned the material by rote rather than understanding the logic of the material they have studied. To memorize what a supply and demand diagram looks like is not the same as understanding how market prices are determined. To be able to repeat back the definition of a recession is not the same as understanding the causes of economic downturns and the policies that might mitigate the damage they cause. And even if rote learning were acceptable in the past, it clearly is no longer. The nature of the workplace today no longer allows important decisions to be made by a select few at the top while the rest engage in standardized, repetitive activities that, while perhaps involving high levels of skill, do not

require active problem solving and decision making. As a result of the faster pace of technological innovation and the increased level of competition that has come about as a result of market globalization, companies today must be flexible and able to adapt quickly to the demands of the marketplace. Such flexibility and adaptability requires employees who can solve problems, who can think on their feet, and who are allowed to make important decisions on a daily basis. Clearly, success in the global economy today requires being able to think critically about economic issues.

This book provides you with the opportunity to learn how to think critically about economic issues. Like any skill, learning to think critically about economics requires both understanding the basics and plenty of practice. This handbook provides you with a description of these basics and a number of exercises that will allow you to practice your skills.

### EXERCISE 1.1

Students in introductory economics courses sometimes treat the definition of economics as if it were fixed and never changing. But the definition of economics is far from fixed, and over time different economists have characterized it differently. Consider the following definitions of economics that have been suggested by two famous economists:

*Writers on Political Economy profess to teach, or to investigate, the nature of Wealth, and the laws of its production and distribution : including, directly or remotely, the operation of all the causes by which the condition of mankind, or of any society of human beings, in respect of this universal object of human desire, is made prosperous or the reverse.* • JOHN STUART MILL (1848)<sup>2</sup>

*Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing.* • ALFRED MARSHALL (1920)<sup>3</sup>

1. Reread the two quotes carefully and try to make sense of them. If you are confused by the odd use of words, feel free to discuss these definitions with fellow students or your professor. Then rewrite each of the above definitions in your own words so that its meaning would be clear to a bright high school student.
2. Explain in what way Mill's definition and Marshall's definition are different.
3. Explain what is common to Mill's definition and Marshall's definition.

<sup>2</sup>The quote is from John Stuart Mill's famous *Principles of Political Economy* book (Mill (1891, p. 13)), which was a standard text for learning economics for at least half a century.

<sup>3</sup>Marshall (1948, p. 1).

4. Which definition of economics is likely to be of greater value to a business person? Why did you conclude that?
5. Which definition of economics is likely to be of greater value to a government policy maker? Why did you conclude that?
6. Which definition of economics is likely to be of greater value to a consumer? Why did you conclude that?
7. Read the box that contains some details about the lives of Mill and of Marshall. Based on their personal histories, provide a possible explanation for why each chose the definition that he did.

## BOX 1.2

**JOHN STUART MILL**

Born in London in 1806, John Stuart Mill was the son of a Scottish intellectual who home schooled his son with the intent of creating a brilliant philosopher who would further the cause of Utilitarianism. At age three Mill began learning ancient Greek and reading the classics in that language. At age eight, he began learning Latin and reading the classics in that language as well. Finally, at thirteen, he began an intensive study of various modern subjects including economics and the sciences (he knew the famous economist David Ricardo personally). According to Mill, this resulted in a nervous breakdown at the age of 20. He did not marry until the age of 45. Unfortunately, his wife Harriet Taylor, a philosopher and early advocate of women's rights, died seven years later. Mill never remarried and spent the remainder of his life as a writer of philosophy and economics, as a member of the British Parliament, and as an advocate for women's rights, labor unions, and extension of the right to vote. He died in 1873 at the age of 66 in Avignon, France where he was buried beside his wife.<sup>4</sup>

**ALFRED MARSHALL**

Alfred Marshall was born in an industrial section of London in 1842, the son of working class parents who aspired to membership in the higher classes. After his studies at Cambridge University, he launched a long and successful academic career as an economist. Marshall is noted for being the author of the first modern principles of economics text and for working to make economics more scientifically rigorous through the use of mathematics (though interestingly he believed that textbooks should focus on verbal translations of the mathematics to make the material accessible to a broader audience). He was married at the age of 35 to Mary Paley. Mary Paley was one of the first women to study at Cambridge University and an economist with whom he collaborated on a number of works, though not all of those works bear Paley's name. He had an especial interest in the economics of industry.<sup>7</sup>

<sup>4</sup>Photograph of John Stuart Mill courtesy of the Library of Congress, cph 3b23680.

<sup>5</sup>This biography is based on John Stuart Mill (2010). Interested students are encouraged to consult that source for access to links that provide details about Mill's life and his work.

<sup>7</sup>This biography is based on Alfred Marshall (2010) and Coase (1984). Interested students are encouraged to consult the first source for access to links that provide details about Marshall's life and his work.

## I.2

**FOUR STEPS TO THINKING CRITICALLY IN ECONOMICS**

Despite what may seem like a difficult task, clear and effective economic thinking can be accomplished by taking four basic steps:<sup>8</sup>

- 1. DECIDE WHAT THE ISSUE IS** • If you have ever done any type of research, you have probably experienced the problem of spending enormous amounts of time and energy on some problem only to discover that you don't know what you're trying to do and that all your efforts have been wasted. Almost always, this problem of "spinning wheels" can be traced to not having a clear idea of what the issue is all about. To avoid that sinking feeling that comes from realizing all your efforts have been wasted, invest some time at the beginning of the thinking process to defining the question clearly and precisely and to noting why you care (that is, what your purpose is).

## BOX I.3

**"WHAT DO YOU MEAN, MR. PRESIDENT?"**

I had only been Chair of the Council of Economic Advisors for two days when the President burst into my office. "I need a report on international trade by Monday!" he exclaimed before running out of my office.

"Excuse me, Mr. President. Excuse Me! EXCUSE ME!" I yelled as I ran down the hall after him. Luckily, he had stopped at the receptionist's desk for a doughnut, and I was able to catch him. "Excuse me, Mr. President, but could I ask you a few questions before you go?"

"No problem," he replied. "What do you want to know?"

"First," I stammered trying to catch my breath, "do you want a status report on current trade activities or do you want a policy report?"

"A policy report."

"Second, do you want a list of possible policies, or do you want us to simply give you a recommendation on what we think should be done?"

"Just a recommendation."

"Third, should this recommendation deal with a comprehensive trade policy, or do you have something more specific in mind?"

"What do you mean?" It was clear the President wasn't aware of exactly what he wanted.

"Are you concerned with our trade with Europe?" "No."

"Japan?" "No."

<sup>8</sup>The nature of this four-step process and its general value is explored further by a variety of critical thinking authors. See, for example, Paul (1993) or Ruggiero (1996).

"Then with whom?"

"Actually, now that I think about it..." he paused to take a bite of his doughnut, "...it's China. I just got back from there, and it's clear to me that we need to develop a formal economic policy to deal with the Chinese government."

Finally, we were getting somewhere. "So you need a position paper on a China trade and investment policy?" I asked him.

"Yeah, that's it," he replied.

"And is this an overall trade policy or should we focus on a specific area?"

"What do you..." he took another bite of the doughnut, "...mean?"

"Well, is the issue one of stimulating or of restricting trade and investment?"

"Stimulating trade and investment, of course."

"And is this in general or do you have a specific industry in mind?"

"What did you say?" The President had turned away from me to grab another doughnut.

"Are you interested in a general increase in trade and investment with China or are you concerned with a particular industry?"

"With fast food," he mumbled as he ate the new doughnut. "When I was in China, I noticed that there are hardly any fast food restaurants over there. What can we do to get good ol' American fast food over there?"

"Great!" I responded. "I think I know what you need. We'll have the position paper by Monday."

"Thanks!"

"You're welcome, Mr. President."

**2. BECOME AWARE OF YOUR INITIAL FRAME OF REFERENCE** • In trying to answer an economic question, many people are under the mistaken impression that they begin with no particular view and that thinking simply means gathering information and constructing (or choosing) the view that makes the most sense. In reality, even if we have no initial opinion on the issue, all of us begin with a set of prior experiences, information, ways of thinking, and values that make up our initial frame of reference. While some of this initial frame of reference may be valuable in thinking about the issue at hand, some of it may actually get in the way of clear, effective thinking. What is important is to recognize that we all have an initial frame of reference and that after you have defined the issue, the next step to thinking effectively about that issue is being aware of "where you're coming from". To become aware of your initial frame of reference, ask yourself what, if

anything, you already know about the issue. Have you already come to any conclusions about this issue? What important values do you hold that are connected to this issue? Have you already come to any conclusions about this issue? What important values do you hold that are connected to this issue?

**BOX 1.4****A ROSE BY ANY OTHER NAME... (PART I)**

There is no good, single word to describe the set of prior experiences, information, ways of thinking, and values that we start with when trying to answer an economic question. One possibility is to use the word *viewpoint* (the point from which a person views the world). Unfortunately, however, many people use that word to indicate a person's concluding opinion about an issue and not the point from which one begins to think about an issue. Another good candidate, the word *perspective*, suffers from the same problem. The phrase *where you're coming from* seems a good description but is too long to be generally useful. As a result, this book uses the somewhat awkward phrase *frame of reference* to indicate that set of prior experiences, information, ways of thinking, and values with which we view the world and think about an issue.

- 3. GATHER RELEVANT INFORMATION AND SEARCH FOR A VARIETY OF POSSIBLE ANSWERS** • Having decided what the issue is and having become aware of your initial frame of reference, you are now ready to look for relevant information and possible answers to your economic question. There are a number of sources for such material. The popular press, for example, includes a number of respected newspapers (such as *The New York Times* or *The Financial Times* of London) and magazines (such as *Business Week* or the international news magazine *The Economist*) that contain well written economic analyses of current issues. There are also a large number of academic journals (such as the *Journal of Economic Perspectives* and the *Journal of Economic Literature*) that provide a wealth of in-depth economic analysis of virtually every topic that comes under the definition of economics. Finally, there are a number of research institutes (such as the American Enterprise Institute, the Brookings Institution, and the Urban Institute) and government agencies (such as the Bureau of Economic Analysis and the Bureau of Labor Statistics) that publish short books and statistics on issues of contemporary interest. For basics facts about a variety of economic activities, the annual edition of *The Economic Report of the President* and the annual edition of the *Statistical Abstract of the United States* are especially valuable places to start.



## BOX 1.5

**CAVEAT LECTOR!\***

In the old days, the primary source of economic information was found in books and periodicals located in libraries. Because of the expense of running libraries and of publishing books and periodicals, librarians and publishers had a strong motivation to assure that the information was accurate and reliable. As a result, librarians and publishers acted as the information police for us. But with that protection, library users became relatively passive and often did not think critically about whether the information they were encountering was accurate or reliable. They simply trusted the libraries and publishers.

Nowadays, libraries still provide access to all sorts of information. But for most of us, our first place to look is on the internet. And that has in many ways been for the good – economic information is now shared much faster and in much more convenient forms than ever before. But there is one downside – libraries and publishers no longer filter all the information we see. And as most students already know, while there is a wealth of accurate and reliable information on the internet, there is also a lot that is inaccurate, unreliable, and at times deliberately misleading.

So how do you separate the trash from the treasure? The key is to develop a general skepticism about everything you read, hear, or see and to not accept information just because it's on the internet or presented with assertive authority.

"That sounds fine," you may be thinking, "but I can't do original research to verify everything I come across." That's right, you can't. You do need to trust what you find. The problem, then, is to develop a method for figuring out when to trust and when not to trust.

To figure that out, first always ask who is providing the information. If it's a person, who are they? Do they have a name? (Nameless sources are always a bit suspicious.) Do they have a degree in the subject area? What type of degree? Is it from a reputable institution? Do they have work experience in the subject area? What is that experience? How long have they worked in this area? Is there reason to believe they are objective, or are they interested in advocating some particular position? If it is an organization, what is the name of the organization? Who runs it? Where is it located? Is it affiliated with other organizations? What is the organization's mission?

The second step to figuring out whether the information can be trusted is to look for additional sources that confirm that information. Search the internet, talk to people you trust, and use the library and established publishers (they still act as information police). In terms of talking to people, there are, of course, your professors. But you may want to search out others as well – professionals in the subject area who have more experience sorting through valid versus bogus information. And don't be shy. Most people love to talk about their work. Just be polite, introduce yourself, and explain why you need their help. And don't forget about using the phone or email to contact strangers whom you have reason to trust. They may not respond, but then again they may. And if you ask nicely and don't overdo it, it can't hurt!

\*Have you figured out what "Caveat Lector" means? It is Latin for "Reader Beware".



**4. COME TO A CONCLUSION** • 1. Once you have gathered your information, decide what the best answer to your question is and what that means (that is, what the implications and consequences would be) if you are correct. You may find that the best answer is none of the answers you found but rather some more complicated, and perhaps unique, combination of several views that you have put together. Be careful that you don't too quickly dismiss any possible answers that conflict with initial views that you may have held. Consider the conflicting views honestly before deciding whether to keep them or toss them out.

**A FINAL POINT** • As you go through this process of thinking, do yourself a big favor and be sure that you put your thoughts down in writing. Write the question you're working on in a single sentence. Make note of why you're trying to answer this question. Jot down notes on relevant prior experiences, information, ways of thinking, and values that you bring to this issue. Summarize the material you come across in looking for more information and different views. Sketch out the answer that you finally decide is the best and note the implications and consequences of that answer were it true.

Don't be afraid to put things down because they might be silly or foolish. This is writing for yourself, not for others. Writing for yourself is a time-honored way to make sure that you don't lose that brilliant thought when your mind turns to the next task. It also is a way to make sure that your ideas really do make sense. Sometimes the mind plays tricks on itself. In writing your thoughts down, you give your mind the chance to reexamine its thoughts at a deeper level.

*Reading maketh a full man, conference a ready man,  
and writing an exact man.*

FRANCIS BACON (1561-1626)<sup>9</sup>

## EXERCISE 1.2

*The purpose of this exercise is to give you a chance to practice three of the four basic steps that make up critical economic thinking (the choice of the issue has already been done for you!). Be sure to note that giving reasons for your views is just as important and necessary a part of the exercise as the views themselves.*

For each of the issues listed below, think critically about each issue by answering the following questions (Special note: If you are using this book as part of a course, your professor may want to restrict your attention of those topics that are relevant to your course or to give you other issues to work consider.):

<sup>9</sup>The quote is from the essay "Of Studies" in Bacon (2003). Francis Bacon is considered by many to be the father of modern science and the scientific method. See Francis Bacon (2010) for an introduction to his life and links to further details.

1. Become aware of your initial frame of reference.
  - a) What do you believe the purpose of the policy to be?
  - b) Do you think this purpose is an appropriate function of government?
  - c) Do you already have any data that shows that the policy achieves or doesn't achieve this purpose?
  - d) Do you have an initial opinion about whether the policy is a good one? If so, what is that opinion and why do you believe that?
2. Look for a variety of possible answers and empirical evidence.
  - a) Find at least two sources that take different views of the policy.
  - b) Using the box *Caveat Lector* as guidance, describe your sources and explain on what basis you have decided to trust the information that it provides.
  - c) What is the overall conclusion of each source?
  - d) What is the main argument or line of reasoning that each source uses to support its conclusion? If it provides no clear reasoning, be sure to note that.
3. Decide what the most reasonable answer is.
  - a) Having researched this issue, what do you now believe is most reasonable answer to this question?
  - b) If this answer is different from your initial opinion, what led you to change your mind? If this answer is the same as your initial opinion, why were you not persuaded by the source(s) that argued for the opposite answer?

**ISSUE 1:** The Minimum Wage. The Fair Labor Standards Act established a national minimum wage of \$0.25 per hour in 1938. In 2007, the US Congress passed legislation to gradually increase the minimum wage from \$5.15/hour to \$7.25/hour by July 2009. Do you think the US Congress should have raised the minimum wage?

**ISSUE 2:** Health Care Reform. The purpose of the *Patient Protection and Affordable Care Act* and with *Health Care and Education Reconciliation Act*, both passed in 2010 by the US Congress, was to expand health care coverage and slow the growth in cost of health care in the US. Do you think the US Congress should have passed those acts?

**ISSUE 3:** Student Aid. The purpose of the *Student Aid and Fiscal Responsibility Act* of 1999, which was passed in 2010 as part of the *Health Care and Education Reconciliation Act*, was to increase the size and number of Pell Grants (used to help support students pay for post-secondary education). Because of that bill, the Federal government will no longer subsidize private higher-education loans. Should the US Congress have passed this act?

**ISSUE 4:** The Bank Bailout of 2008. The *Emergency Economic Stabilization Act* passed by the US Congress in fall 2008 was intended to keep financial markets from collapse. Do you think that this act kept financial markets from collapse?

**ISSUE 5:** The Stimulus of 2009. The *American Recovery and Reinvestment Act* passed by the US Congress in early 2009 was intended, in part, to reduce the level of unemployment associated with the recession occurring at the time. Do you think that this act succeeded in reducing unemployment?

**ISSUE 6:** Length of the Work Week. In part because of a desire to help families spend more quality time together and in part out of a desire to reduce unemployment, some countries have shortened the work week below the traditional 40 hours. Should the US do the same?

## 1.3

### CRITICAL DISCUSSIONS

So far, it would seem that critical thinking is by its very nature an individual (and perhaps lonely) activity. Nothing could be further from the truth. If you have ever talked with a close friend about some shared concern and been unafraid to examine your deepest thoughts, you have engaged in critical thinking that involved more than one person. Indeed, great thinkers through the ages have argued that because face to face discussions involve the whole person (intellectually, emotionally, and physically) they are the best way to engage in critical thinking and are the stuff that true friendships are made of.

Of course, the critical discussions that you have had are not likely to have centered on economic issues. Nonetheless, discussions can and do play a large role in making sense of economic issues. Policy makers from the President of the United States down to your local city council often make decisions on the basis of discussions between various advisors, experts, and citizens. And in business, the team approach is now a time-honored method for developing strategies to solve problems or exploit new opportunities.

In college, such discussions can happen in a variety of ways. Perhaps the simplest way is through casual conversation among students or between a student and a professor. However, professors often use more formal methods to incorporate critical discussion into the classroom.

*Truth springs from argument amongst friends.*

ATTRIBUTED TO DAVID HUME (1711-1776)<sup>10</sup>

<sup>10</sup>Hume (n. d.). The source of this quote is not clear, and it may be a paraphrase of Hume's writings rather than an actual quote. However, it is consistent with Hume's work, and encapsulates the social nature of critical thinking. See David Hume (2010b). Hume is one of the giants of modern philosophy and a rough contemporary of Adam Smith. For an overview of Hume's life and work, as well as links for further details, see David Hume (2010a).

**QUESTION AND ANSWER SESSIONS** • The simplest form of discussion occurs through some sort of question and answer session. It may be as simple as the professor entertaining questions during a lecture. Or the professor may take a more active role by asking questions of students. In either case, however, the value of the discussion depends on the student. To get the most out of a question-and-answer session, don't settle for just asking the professor what something is or telling the professor what the answer is. Be assertive and insist on more. Follow up by asking why – Why is it important? Why is it true? Etc. Thus, for example, if you want to know what scarcity is, don't just ask for the definition. Follow up by asking why it is an important concept in economics. And if the professor is the one asking the questions, answer as best you can, and then follow up by asking the professor why it is important. Economic thinking is more than facts – it is about reasoning and making sense of things.

**ECONOMIC CASE DISCUSSIONS** • Informal discussions and question-and-answer sessions can be quite useful. But they have their limits. Often times, there is not enough time to fully explore an issue. And often times, informal discussions and question-and-answer sessions don't have enough structure to help students work methodically through an issue. As a result, professors sometimes use case discussions to engage in more structured, extended discussions. If the class is small enough, the whole class can be part of the discussion. If the class is larger, it can be done with several breakout groups (typically less than 10 students each) which discuss the case separately before presenting summaries of the results of their discussions to the whole class.

In either situation, an economic case discussion typically begins with a story that raises questions to be answered or problems to be solved. Accompanying the story may be related materials such as newspaper articles, tables, or graphs. The task for students is to analyze the situation, determine what the issue (or issues) is, and argue how to address the issue. Unlike working on problem sets or writing papers, however, cases require in-class discussion to identify the issue and to analyze the issue posed by the case. And because the case emphasizes a stylized real-life situation, it provides us with an example from which we can learn more general lessons.

Many students feel uncomfortable when first asked to participate in a case discussion. Common problems expressed by students include:

*Preparing for a case discussion is frustrating* • As in situations faced by real decision-makers, the information supplied in a case is frequently partial and, at times, even misleading. And sometimes students may find themselves overwhelmed by the volume of information. To complicate matters further, the problems presented are both ambiguous and complex. But that's the point – a case typically has no single “correct” answer. The purpose of the case is not to learn what answers to memorize; it about coming up with a variety of possible answers and then discussing the relative merits and faults with those answers.

*Class discussions are intimidating* • Learning through case discussions not only calls for your active participation, it demands it. Few people can learn how to ride a bicycle by reading a manual or listening to an explanation, and few can carry out effective economic thinking without participating in the process. Case discussions are useful because they force a level of participation and involvement that is not always present when students attend a lecture or study outside of class. Unfortunately, many students are initially unsure of themselves or don't like calling attention to themselves. As a result, they are often hesitant to jump into the discussion.

These problems, however, are not insurmountable. If you want to get the most out of an in-class case discussion, you should:

*Read the case material before going to class* • Conversation often moves quickly in a case discussion. As a result, there is little time for more than a quick glance at the case materials. To get the most out of the in-class case discussion, you should read all the material beforehand. Be sure to follow any instructions, and try to master the content of the case material.

*Pay attention to any data that are presented in the case* • This information, which may be included in the narrative but often is found in tables or graphs with no mention in the narrative, may have an important bearing on the case. Try to work out any quantitative analysis that might help you understand the problem. Make whatever calculations you might need and bring them to the in-class discussion.

*Ask how economic analysis might help* • Remember, the purpose of the class is to help you learn about how economic thinking can be useful in real world economic decision making. It may be useful to keep a short list of economic principles and concepts that you have learned and ask yourself while reading the case whether any of those concepts can be applied to the material you are reading.

*Be prepared to share your analysis in the classroom* • The purpose of the case is to learn how to critically think about economic issues. You may have the key that helps a fellow student, or you may be the one having problems thinking the issue out. In either case, by sharing your thinking, flaws and all, with the class, everyone in the class can benefit. In many case discussions, your role is simply to think out the case with the rest of the class. In other case discussions, however, you may be asked to role play by taking on the identity of a particular character in the case. This often takes a bit of imagination but can have big payoffs because it allows the class to consider a broader set of ideas than would otherwise be discussed.

So, how do you know if you did well in the case discussion? Don't worry about whether you solved the problem; the key is that you were an active, contributing part of the discussion:

*You understood the case's content* • You contributed relevant information from the case. Your comments indicated that you read the case carefully, that you understood the situation, and that you understood how the case connects to previous material in the course.

*You supported the thinking of others* • Your comments showed that you listened to others by building on the ideas of others, responding to their questions, providing constructive criticism of those ideas when you disagreed, and asking questions of your own when you were confused or thought additional clarity was needed.

*You offered quality arguments of your own* • Your comments were reasonably clear, accurate, relevant, logical, and exhibited some understanding of the breadth and depth of the issue being discussed.

And how will you know if things didn't go well? Your participation resulted in only one- or two-word answers to questions without elaboration, in making remarks that were irrelevant, that showed insensitivity to others, or that rambled incoherently. But it's not hard to do well. Try to participate even if you do not feel what you have to say meets the criteria of a good contribution. And remember that sometimes the best contribution to a discussion is simply asking a question. You've heard it before, but it is true – sometimes a “dumb” question or answer may advance the discussion and clarify things in other people's minds far more than a brilliant speech. Don't hesitate to admit confusion, ask for clarification, or simply be wrong. In short, don't worry! You're among friends. Speak up. If you were already an expert in critical economic thinking, you wouldn't be taking the class. Case discussions are one of the few places where you can try out new ideas and ways of thinking without penalty.

In case discussions there are no wrong solutions – There are only solutions that must be compared and evaluated. Your contribution to identifying and evaluating solutions is the important feature of a case study.

### EXERCISE 1.3

*Case discussions range from very simple discussions that only take up part of a class to elaborate, extended discussions that take place over the course of several classes, if not an entire semester. This exercise gives you the opportunity to practice participating in a relatively simple case discussion.*

Analyze one or more of the cases below (your professor may have further instructions about this) by discussing them with your fellow students. Each case

will have specific questions to get you started. However, you may find the following general questions to be a useful guide to your analyses.

- What are the issues raised by the case?
- Is there a single, overall issue, problem to be solved, or question to be answered?
- Who are the characters in the case? Describe them, and determine what their motivations and perspectives are.
- What information is presented in the case (data, facts, circumstances, etc.)?
- Is there additional information that you can use that is not presented in the case but which it would be reasonable to use? If so, what is that additional information? And why is it reasonable to use it?
- What economic ideas, concepts, and theories would be useful in making sense of the case?



## VACCA NURSERIES

Date: 2/9/11

To: Walter McCarthy, Director of Marketing  
Christina Napiorski, Director of Product Development

From: Neal Vacca, President

RE: Company Direction

As I am sure you are aware (just do a web search of the words “recession” and “gardening”), current economic circumstances have been a boon for the nursery business. But while business has been good lately, I think it could be better. As a result, I want to explore proposals for a new business initiative that would further solidify Vacca Nurseries’ market share and lay the ground work for Vacca Nurseries to become the dominant retail nursery in the region in the next 10 years.

What I need from each of you by the end of the month is a proposal from your department as to what it would do with a budget of \$2 million to achieve this goal along with a rationale for why your proposal would work. Send those proposals to me and share them with each other. Then, at our next monthly management meeting after the proposal deadline, come prepared to argue your case and challenge the other department’s case.

After discussing the relative merits of your proposals, I will decide which proposal is better and authorize the winning director to begin implementation at once.

Thanks for your help.

NV/dpl  
Enc. 0

- What options do the characters in the case have? What are possible solutions to the problem raised? What are possible answers to the question raised?
- What are the arguments in favor and against the options, possible solutions, or possible answers that you came up with in the prior bullet?
- Is there an overall best option, solution, or answer? What is it, and why is it best?

### CASE 1 – MARKETING VERSUS PRODUCT DEVELOPMENT

Consider the following memorandum from Neal Vacca, the president of a local nursery business, about future business plans.

- What should Walter McCarthy propose?
- What should Christina Napiorski propose?
- What should Neal Vacca do?

**CASE 2 – UNEMPLOYMENT VERSUS LONG-TERM ECONOMIC GROWTH**

You are the primary economic advisor to the current President of the United States. Congress is currently debating two bills, one of which would reduce unemployment, the other of which would stimulate long-term economic growth, and each of which would cost \$5 billion. The President has asked you to lay out his options on these two bills, provide an assessment of each option, and give your advice as to which option in your estimation would be best. Finally, in considering your advice, the President also asks you to consider the following recent headlines:



- What are the options that you should give the President?
- What are the pros and cons for each option?
- What is, in your estimation, is the best option?



## 1.4

## CRITICAL READING

Gathering information and understanding the arguments of others is an important part of thinking critically. In economics much of that process takes place through reading. Particularly at the introductory level, most students think in terms of textbooks, but even at that level a course can often be enhanced by the inclusion of economic monographs (shorter, single topic essays or books) or economic articles written for an intelligent lay audience. Many students find economic writing to be difficult to make sense of, and it not uncommon for a frustrated student to give up trying.

Like the writing in any area, some economic literature is better written than others. However, often times it is not so much the writing as it is the reading strategies used by the student that are the problem.

Economic writing is not intended for pleasure. It is not something that one can casually read while watching TV, playing on the computer, or being actively involved in texting friends. Rather, it is a complex argument that is intended to lay out a claim and to persuade you through *conceptual argument* and *empirical evidence* that the claim is worth believing. To make sense of an economic argument, you need to approach it like an attorney interrogating a hostile witness or a food critic attacking a plate of food. In short, it has to be read critically.

So what is critical reading? Critical reading is essentially a form of critical discussion with whoever wrote the material. The only problem is that you can't directly talk to the author. Instead, everything the author has to say is already in front of you, and so it is up to you to carry the conversation. That may sound difficult, and it certainly requires more energy than an actual conversation. But the returns to those efforts are enormous. Just follow the following *Five Steps to Reading Critically*, and if they remind you of the *Fours Steps to Thinking Critically* described earlier in this chapter, you've already started reading critically!

- 1. DETERMINE THE PURPOSE OF THE WRITING** • The first step is to figure out what the purpose of the writing is. Is it to answer a question? Then what is that question? Is it to persuade you to believe something? Then what is that something? To figure out what the purpose is, read carefully the beginning of the material (the introduction, the first few paragraphs, or the first section). If that doesn't tell you what the purpose is, skim through the reading (don't ignore the headings that accompany the text) and look for a conclusion or summary at the end. This first step is a bit of a detective problem. And don't be concerned with making a mistake. As you work through the reading in more detail later, if you've made a mistake, you'll have time to revise what you think the purpose is. But don't move to step two until you have some working hypothesis as to what the author is trying to do.
- 2. FIGURE OUT THE CONTEXT OF THE WRITING** • The next step is to figure out who the author is and what the author assumes is already in your head. Is the author an economist? Or does the author have some other profession?

Where does the author work? Why, as best you can figure out, was the material written? Keep all that in mind later when you read the material in detail. Remember, this is a conversation, and it helps to know whom you are talking to. Once you've got a reasonable grip on the author, think a bit about what the author is assuming about you. Does the author assume that you already have a certain level of education? Does the author assume you already have a certain level of mathematical ability, or already have a particular set of personal or professional experiences? Does the author assume that you have a specific purpose in reading the material?

3. **BREAK THE WRITING UP INTO PARTS** • The heart of economic writing is focused on fulfilling the overall purpose that you determined in Step 1. And typically, fulfilling a purpose is done through a sequence of arguments. So, now that you have a sense of the purpose of the material and its context, break the writing up into manageable parts. Sometimes the parts are easy to see because they are divided by headings that introduce each part. But sometimes it takes a bit more detective work. Skim through the material again and see if you can identify where the author moves from one argument to the next. Again, don't worry if you later discover you've made a mistake or two. You can always revise as you discover your mistakes. And don't forget to do this with smaller pieces of writing. Although you may be tempted to skip this step, even smaller pieces of writing progress through a sequence of arguments. It's just that the arguments are now a paragraph or two rather than longer pieces of writing separated by headings.
4. **MAKE SENSE OF EACH PART** • Now (finally!) you can dig in and make sense of each part. What is the author trying to tell you? (Remember, this is a conversation.) Pay attention to the reasoning of each part (that is, figure out each time the author says, "*This is true because ...*"). Look for empirical evidence (data, examples, anecdotes, etc.).
5. **PUT IT ALL TOGETHER** • Once you have made sense of each part, step back, take a look at all the parts in the order they were presented, and figure out if they work together to fulfill the overall purpose of the writing. If not, figure out what the problem is.
  - If you didn't understand certain parts, go back to those parts and work through them again. You may find it useful to talk to others (for example, your fellow students or your professor) about those parts that you are having difficulty with.
  - If you understand the parts, but don't see how they fit together, try going step-by-step from one part to the next to see if the connections start to make sense. It could be you missed something. But it could also be that the author left something out. Again, talking with someone may help.
  - Finally, don't rule out the possibility that the author has made a coherent argument, but you disagree. If you think this is the case, first think of

the argument from the author's perspective, keeping in mind what you figured out in step 2 above. Then ask yourself what are the reasons you disagree. Is it a mistake in reasoning? Do you have empirical evidence that doesn't fit with the author's argument? Do you have a different set of values than the author?

#### EXERCISE 1.4

*This exercise gives you the chance to practice your critical reading skills with a classic piece of economic writing. The writing is a bit old fashioned, but if you're methodical about it, you may be surprised how much you end up understanding. And the payoff will be worth it. Not only will you learn a bit about a fundamental principle of economics, you will also learn how to read the works of the person who in many ways created the modern science of economics.*



Adam Smith published *The Wealth of Nations* in 1776. There are a number of places where you can find a copy of that work. See for example, Smith (1937) in the reference list at the end of this book. However, a little bit of searching in bookstores, in libraries, and on the web (just do a web search for “Adam Smith” and “Wealth of Nations”) will reveal how easy it is to find a copy. Smith divided *The Wealth of Nations* into sections that he called “Books”, and within each Book he included several chapters. Find Book I which has the long title: “Of the Causes of Improvement in the productive Powers of Labour, and of the Order according to which its Produce is naturally distributed among the different Ranks of the People”. Then in Book I, find Chapter 1 (with the short title: “Of the Division of Labour”), and begin following the instructions below.

1. Using the *Five Steps to Reading Critically*, begin by determining the purpose of Book I, Chapter 1, and then write down that purpose. You may want to skim Smith's introduction (“Introduction and Plan of the Work”) that immediately precedes Book I, Chapter 1. And don't forget to look at the headings. Smith's headings are often rather long by modern standards. But they contain important information for those who want to understand what Smith is saying. Especially in those headings, every individual word has importance, so you may find you want to first consider the meaning of each word separately.
2. Now that you have a sense of where Smith is going with Book I, Chapter 1, figure out who Smith was and who he thinks you, his reader, is. Then write your conclusions down. The preface(s) to *The Wealth of Nations* may help. But you are also likely to need to look elsewhere for a brief biography. If you

<sup>11</sup>Photograph of Adam Smith courtesy of the Library of Congress, LC-USZ62-17407.

- need to, refer back to the third step of the *Four Steps to Thinking Critically* (“Gather Relevant Information and Search for a Variety of Possible Answers”).
3. The next step is to break Book I, Chapter 1 into parts. It’s a relatively short piece of writing, so you may find that each part is a single paragraph. Write down a description of how you divided up the material along with a brief explanation for why you did it that way.
  4. Read each part, make sense of what Smith is trying to tell you, and then write down a brief summary of that part. Refer back to the fourth step of the *Five Steps to Reading Critically* if you need a reminder of how to do this.
  5. Finally, look at the sequence of summary statements you wrote for each part. Then, using the fifth step of the *Five Steps to Reading Critically*, compare that sequence to the overall purpose of Book I, Chapter 1 that you wrote down in part 1 of this exercise. If you need to revise what you wrote in part 1 of this exercise, go ahead and do so. Then ask yourself if you understand what Smith is talking about and whether he has succeeded in fulfilling the purpose of that chapter. Write down a brief explanation of why or why not.

## I.5

### CRITICAL WRITING AND SPEAKING

One of the most important purposes of critical economic thinking is to focus your thinking so that you can clearly and effectively communicate with others. And that communication often requires writing your thoughts down or making presentations. Projects need to be completed. Problems need to be solved. Planning needs to take place. The communication may involve arguing for a particular strategy with your boss or explaining the importance of a project to subordinates. It may involve negotiating with a supplier or trying to sell your product to a customer. It may even involve defending your company against charges in the press or by government officials.

There are two types of critical writing and speaking. The first type is informal and intended only for yourself or for close associates who already understand the context of what you are working on. Exercise 1.4 in the previous section provides an example of informal writing. And if you had reported your results verbally to someone, that would have been informal speaking. Such communication is typically used not to report final thoughts and arguments, but to keep track of things while you are working things out. In short, it is an aid to the process of thinking critically.

The other type of critical thinking, and the main subject of this section, is more formal and is intended to communicate the results of your thinking clearly, effectively, and persuasively. It is the form of writing and speaking used for all the examples described above in the introductory paragraph. And to engage in formal communication, you need to do five things: